

**Notice of Allowability**

Application No.

10/808,569

Examiner

Christopher R. Magee

Applicant(s)

SHIRAKAWA ET AL.

Art Unit

2627

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 10/12/2006.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.


**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



U.S. Patent and Trademark Office  
PTOL-37 (Rev. 08-06)

Notice of Allowability

  
**ANGEL CASTRO**  
**PRIMARY EXAMINER**

Part of Paper No./Mail Date 20061220

## DETAILED ACTION

### *Response to Amendment*

1. The reply filed 10/12/2006 was applied to the following effect: All relevant objections and rejections are withdrawn as being satisfied.

### *Reasons for Allowance*

2. Claims 1-10 are allowed.

The following is an examiner's statement of reasons for allowance:

This application is for a TRAY DRIVE MECHANISM FOR AN OPTICAL DISC APPARATUS.

- **Claim 1** specifies a tray drive mechanism for an optical disc apparatus, which requires:

*"a plate member comprising a boss and a cam groove, the boss of the rack member being provided to transfer a driving force to the plate member, wherein a slope portion of the cam groove of the plate member meshes with the boss of the rack member when the rack member is driven toward the inner circumference of the optical disc; and a cam slider slidably supported by the base chassis of the optical disc apparatus, the boss of the plate member being provided to transfer a driving force to the cam slider, wherein the cam slider comprises a cam groove to guide the boss of the plate member for raising and lowering the drive mechanism chassis so as to clamp and unclamp the optical disc, a boss to guide the tray, and a rack to mesh with the tray drive gear, wherein..., when the rack member is driven toward the inner circumference of the optical disc, the cam slider slides in linkage with the plate member ....."*

The prior art of record fails to fairly, teach, show or suggest, by either anticipating or rendering obvious, the invention as set forth in the claims of the instant application. Furthermore, a search made does not detect the combined claimed elements as set forth in the pending claims. Additionally, the reasons for allowance of the claims over the prior art of record is believed to be

readily clear, self evident and apparent from the claim language set forth in claim 1, when compared and contrasted with the prior art.

First, *Tanaka '914* fails to disclose a "plate member" comprising a "boss... provided to transfer a driving force to the cam slider" and further comprising a "cam groove... [that] meshes with the boss of the rack member," as recited in claim 1. *Tanaka's* vertical slider 6, however, does not comprise a cam groove that meshes with a boss of a rack member. Cam groove 64 is formed in the rear surface of the cam body rack 47, not in vertical slider 6 [col. 6, lines 34-42; Figs. 9, 10]. Further, cam pins 63 in the vertical slider do not transfer a driving force to rack body 47. Instead, the cam pins engage the cam grooves in the rack body in response to lateral movement of the rack body, which is caused by rotation of the switching lever by the switching rack [Applicant's remarks, pages 9-10].

Second, *Tanaka '914* also fails to disclose a cam slider that comprises "a cam groove...[and] a boss to guide the tray" and that "slides in linkage with the plate member" when the rack member is driven, as required by claim 1. *Tanaka's* rack body 47 does not comprise a boss to guide a tray and does not slide in linkage with the vertical slider in response to a transfer of driving force from a boss of the vertical slider. In *Tanaka's* system, rotation of the switching lever by the switching rack slides the rack body. Lateral movement of the rack body causes pins of the vertical slider to engage the cam grooves of the rack body, which causes the vertical slider to move [Applicant's remarks, pages 9-10].

None of the cited prior art of record disclose such a tray drive mechanism for an optical disc apparatus, as set forth in the manner, function and relationship relative to other claimed structures as prescribed by the independent claim. Therefore, these features, in combination with

Art Unit: 2627

other features of claim 1, are not anticipated by, nor made obvious over, the closest prior art of record of *Tanaka '914*.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2627

***Conclusion***


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-4: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**ANGEL CASTRO  
PRIMARY EXAMINER**



Christopher R. Magee  
Patent Examiner  
Art Unit 2627

December 20, 2006  
crm